

Abstract of the Disclosure

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Objectives of the present invention are providing a display apparatus and a drive method thereof for lowering the signal voltage of the liquid crystal matrix panel without deteriorating the picture quality, for reducing non-uniformity of brightness over the panel caused by non-uniformity of output voltages of the drive circuit and the parasitic capacitances between terminals of TFT and for preventing the smearing in the displayed picture.

The present invention presents a matrix panel display apparatus having plural signal lines and plural scanning lines intersecting each other and, near each intersection point, a picture element including a picture element electrode, a counter electrode, a display medium between said two electrodes and a transistor for applying image signals from said signal line to said picture element electrode controlled based on said scanning signals from said scanning line, which said apparatus comprises;

means for generating auxiliary signals for increasing the effective voltages of said image signals and applying said auxiliary signals to said picture elements while each of said transistor is non-conducting and each of said picture element is not selected, and a driving method thereof.

The present invention also presents a matrix panel display apparatus having plural signal lines and plural scanning lines intersecting each other and, near each intersection point, a picture element including a picture

element electrode, a counter electrode, a display medium
between said two electrodes and a transistor for applying
image signals from said signal line to said picture element
electrode controlled based on said scanning signals from
5 said scanning line, which said apparatus comprises;

picture signal generating means in a signal circuit
for dividing said plural picture elements selected at the
same time into two groups and for applying first picture
signal group to said first group of picture elements and
10 second picture signal group having the polarity reverse to
the former signal group to said second group of picture
elements, and

bias signal generating means for applying first bias
signals having the polarity reverse to said first picture
15 signal group to said first group of picture elements
through storage capacitances in said first group of picture
elements, and second bias signals having the polarity
reverse to said second picture signal group to said second
group of picture elements through storage capacitances in
20 said second group of picture elements during selection
period of said first and second group of picture elements,
and a driving method thereof.